DEC STD 164-0 Software Use of the Graphic Character Set of ASCII

DOCUMENT IDENTIFIER: A-DS-EL00164-00-0 Rev A1, 22-Nov-1989

ABSTRACT: This standard defines the subset of the ASCII graphic character set to be used by Digital software products.

APPLICABILITY: Applies to all Digital software products.

STATUS: APPROVED 22-Nov-1989; use VTX SMC for current status.

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Responsible Person:	Gary Robinson		

APPROVAL: This standard has been reviewed and recommended for approval by the General Review Group for its category. Rev A1 incorporates clerical changes only.

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1 INTRODUCTION

1.1 PURPOSE

The expansion of Digital's activities in the international marketplace makes it increasingly important that we manufacture products that can be used without extensive adaptation with the various national character sets and keyboards.

Digital products have traditionally used the entire ASCII character set including those character positions reserved for national use. In other countries these characters have different graphics although they are represented by the same binary code. Some of them are used for alphabetic characters with diacritical marks (in some countries the collating sequence is changed as well.) In addition, the characters in the ASCII national use positions are the ones least likely to be found on keyboards manufactured by other vendors.

The purpose of this standard is to assure that software products and documentation can be used internationally without modification to the character set given special semantic meaning in the product, e.g. the character set used as delimiters in a command or programming language.

1.2 SCOPE

This standard defines the subset of the ASCII graphic character set that can be assigned specific semantic meaning by Digital software products. It also gives the names of the character to be used in documentation.

The semantic meaning assigned to the characters is not defined. The coding of these characters is defined in ANSI X3.4-1977, *American Standard Code for Information Interchange.*

This standard does not apply to the contents of user defined character strings, user defined constants or variables, or user defined data.

1.3 RESPONSIBILITIES

This standard should be used when implementing new software products or when extending existing software products.

1.4 CONFORMANCE

This standard applies to all new Digital software products and extensions to existing products.

A conforming product is one that does not assign specific semantic meaning to any of the characters of subhead 2.3 except when:

a. Compatibility with existing products is required, or

b. Conformance to ANSI, ISO, or other national/international standards requires their use.

If compatibility or conformance restraints require the use of an ASCII national use character, the implementation will also support either an equivalent character or (characters) from subhead 2.1 or an equivalent keyword. (For example, in VMS DCL the characters < and > may be used in a directory specification in place of the national use characters [and]. The equivalent characters or keyword will appear in user documentation.

When making new extensions to existing products, the developer should attempt to reserve a character or digraph from the list under subhead 2.1 for any national use position character currently in use.

2 DEFINTION OF THE STANDARD GRAPHIC CHARACTERS AND THEIR NAMES

2.1 GRAPHIC CHARACTERS INCLUDED IN THIS STANDARD

In the table that follows, the graphic and name for each character are given on the left. The right hand column indicates the current use of the character in DCL. The right hand column is NOT part of this standard. Implementors are, however, encouraged to remain compatible with the DCL usage when designing a new product.

	Graphic ASCII Name	Current DCL Usage
	space	Parameter delimiter
!	exclamation point	Comment delimiter
"	quotation marks (Note 2)	Character string delimiter, used for accounting information in node names
$	dollar sign	Beginning of command, used in system file specifications and system command language variable references
%	percent sign	Precedes a keyword for DIGITAL defined features such as octal and hex numbers, name of file to be included, etc. Single wildcard character
&	ampersand	Execution time substitution operator
’	apostrophe (Note 2)	Substitution operator
(	opening parenthesis	Start of a qualifier value list, indication of precedence in an arithmetic expression, start of an argument list
)	closing parenthesis	End of a qualifier value list, indication of precedence in an arithmetic expression, end of an argument list
*	asterisk	Wildcard in a file specification, multiplication or exponentiation in an arithmetic expression, abbreviation marker in symbol definition.
+	plus	A unary or infix operator in an arithmetic expression, file concatenation operator, relative position or time.
,	comma (Note 2)	Used to separate items in a qualifier or parameter list.
-	hyphen or minus	Indication that command will be continued on the next line, a unary or infix operator in an arithmetic expression, a directory searching wild character, used in dates and times.
.	period or decimal point	File type and version delimiter in a file specification, operator delimiter in an arithmetic expression, decimal point.
/	slash (Note 1)	Qualifier delimiter, devision in an arithmetic expression
:	colon	Used to delimit device name, node name (two colons), statement label, qualifier value, and as part of the assignment operator in string assignment range and time delimiter
;	semicolon	Version number delimiter in a file specification
<	less than	Start of a directory specification
=	equals	Delimits beginning of a qualifier value, assignment operator
>	greater than	End of a directory specification
?	question mark	Reserved for future help facility
_	underline	Permitted character in user defined names, preceding a file specification it indicates that logical name translation is not to be attempted

	Graphic ASCII Name	Current DCL Usage
A-Z	uppercase letters	
a-z	lowercase letters	
0-9	digits 0 through 9	

NOTES TO TABLE 1

1. ASCII name for this character is slant.

2. Three characters have alternate names which are not generally used, but may be used if appropriate. These are:

comma, cedilla, quotation marks, dieresis, apostrophe, closing single, quotation mark.

2.2 SPECIAL CASE OF THE NUMBER SIGN

The graphic #, number sign, may be used only if none of the above characters is available and if replacing it by British pound sterling sign would not inhibit use of the product. (These two graphics always have the same character code and occupy the same position on keyboards.)

2.3 GRAPHICS EXCLUDED FROM THIS STANDARD

The following ASCII characters are reserved for national use graphics, that is codes whose graphics are assigned on a country by country basis.

Graphic	ASCII Name
@	commercial at
[	opening bracket
\	reverse slant
]	closing bracket
{	opening brace
}	closing brace
|	vertical line
^	circumflex
‘	opening single quotation mark, accent grave
~	tilde

Note that the commercial at, @, is used in DCL to indicate the invocation of an indirect command file and that opening bracket, [, and closing bracket,] , are equivalent to the characters less than, < , and greater than, >, respectively.

APPENDIX A

EXAMPLE OF NATIONAL USE POSITION

The following table gives the ASCII national use position character and the character that has the same binary code in Germany and France.

See DEC STD 107, Digital Standard for Terminal Keyboards, for the keyboard arrangements used in other countries.

ASCII	FRANCE	GERMANY
@	a grave accent	section sign
[	degree symbol	A umlaut
\	c cedilla	O umlaut
]	section sign	U umlaut
^	^	^
‘	‘	‘
{	e acute accent	a umlaut
|	u grave accent	u umlaut
}	e grave accent	u umlaut
~	dieresis	sharp s

APPENDIX B

REFERENCED AND RELATED DOCUMENTS

Document Number	Document Title
ANSI X3.4-1977	*American Standard Code for Information Interchange*
ISO 646-1973	*7-Bit Coded Character Set for Information Processing Interchange, International Reference Version*
CCITT V.3	*International Alphabet No. 5*
ANSI X3.41-1974	*Code Extension Techniques for Use with the 7-Bit Coded Character Set of American Standard Code for Information Interchange*
ANSI X3.64-1979	*Additional Controls for Use with American National Standard Code for Information Interchange*
EL-00107-00	*DEC STD 107-0 Digital Standard for Terminal Keyboards - Standard Keyboard Layouts*

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